SECTION 1. Chapter NR 820 is created to read:

Chapter NR 820
GROUNDWATER QUANTITY PROTECTION

Subchapter I - General Provisions

NR 820.10 Purpose. The purpose of this chapter is to designate areas of the state in which impacts from groundwater drawdown and pumpage are of such an extreme that regional planning and management is necessary to avoid, minimize and manage future impacts. This chapter shall also establish review criteria applicable to high capacity well applications involving wells situated near springs and certain high quality surface water bodies and groundwater withdrawals with high water loss.

NR 820.11 Applicability. This chapter applies to all counties, cities, towns, villages, utility district under s. 66.0827, Stats., that provides water, public inland lake protection and rehabilitation districts that have town sanitary district powers under s. 33.22(3), Stats., joint water authority created under s. 66.0823, Stats., or municipal water district under s. 198.22, Stats. This chapter shall also apply to persons that are owners of high capacity wells and high capacity well systems including persons that propose to construct a high capacity well.

NR 820.12 Definitions. The following definitions apply to terms used in this chapter:

(1) "Approval" means an approval issued by the department of natural resources prior to construction of a high capacity well under s. 281.17(1), 2001 Stats., or s. 281.34(2), Stats.

(2) "Class 1 trout stream" means a stream, portion of a stream or a farm drainage ditch with a prior stream history that contains a self-sustaining population of trout and classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that support self-sustaining populations of trout but do not have a prior stream history are not trout streams for purposes of this chapter.

(3) "Class 2 trout stream" means a stream, portion of a stream or a farm drainage ditch with a prior stream history that contains a population of trout made up of one or more age groups, above the age one year, in sufficient numbers to indicate substantial survival from one year to the next but in which stocking

is necessary to fully utilize the available trout habitat or to sustain the fishery and classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that meet these criteria but do not have a prior stream history are not trout streams for purposes of this chapter.

(4) "Class 3 trout stream" means a stream or portion of a stream that has marginal trout habitat with no natural reproduction of trout occurring, requiring annual stocking of trout to provide trout fishing, and generally without carryover of trout from one year to the next and classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that meet these criteria but do not have a prior stream history are not trout streams for the purpose of this chapter.

(5) "Consumptive use coefficient" means a constant numerical measure, as determined under s. NR 142.04(1) to (4), Wis. Adm. Code, which is used to determine consumptive use portion of a facility's withdrawal.

(6) "Department" means the Department of Natural Resources.

(7) "80% Exceedance Flow" means the flow in a stream that, based on statistical probability, will be exceeded 80% of the time on an annual basis.

(8) "Groundwater Management Area" means a multi-jurisdictional area including towns, cities, villages and counties within which the level of the potentiometric surface in any of its underlying aquifers has been reduced by 150 feet or more from the level at which the potentiometric surface would be if no groundwater withdrawals had occurred.

(9) "Groundwater Protection Area" has the meaning specified in s. 281.34(1)(a), Stats.

Note: s. 281.34(1)(a) defines "groundwater protection area" to mean "an area within 1,200 feet of any of the following:
(a) An outstanding resource water identified under s. 281.15 that is not a trout stream.
(b) An exceptional resource water identified under s. 281.15 that is not a trout stream.
(c) A class I, class II, or class III trout stream, other than a class I, class II, or class III trout stream that is a farm drainage ditch with no prior stream history.

(10) "High Capacity Property" has the meaning specified in s. NR 812.07(52).

Note: s. NR 812(07)(52) defines "high capacity property" to mean "one property on which a high capacity well system exists or is to be constructed."

(11) "High Capacity Well" has the meaning specified in s. 281.34(1)(b), Stats.

Note: s. 281.34(1)(b)) defines "high capacity well" to mean "a well that, together with all other wells on the same property, has the capacity of more than 100,000 gallons per day."

(12) "High Capacity Well System" has the meaning specified in s. NR 812.07(53).

Note: s. NR 812.07(53) defines "high capacity well system" to mean "one or more wells, drillholes, or mine shafts used or to be used to withdraw water for any purpose on one property, if the total pumping or flowing capacity of all wells, drillholes or mine shafts on one property is 70 or more gallons per minute based on the pump curve at the lowest system pressure setting, or based on the flow rate."

(13) "Local governmental unit" has the meaning specified in s. 281.34(1)((c), Stats.

Note: s. 281.34(1)(c), Stats., defines “local governmental unit” to mean a “city, village, town, county, town sanitary district, utility district under s. 66.0827, Stats., that provides water, public inland lake protection and rehabilitation district that has town sanitary district powers under s. 33.22(3), Stats., joint water authority created under s. 66.0823, Stats., or municipal water district under s. 198.22, Stats”.

(14) "One property" means all contiguous land controlled by one owner, lessee, or any other person having a possessory interest. Lands under single ownership bisected by highways or railroad right-of-ways are considered contiguous.

(15) “Owner” means a person who owns property on which a well is located or proposed to be located or the designated representative of that person.

(16) “Potentiometric surface” means a measure of pressure of groundwater in an aquifer based on the level to which groundwater will rise in a well placed in the aquifer.

(17) “Prior stream history” means a determination made by the department that an artificial waterway or a portion of such waterway was originally a navigable stream before it was ditched or channelized.

(18) “Public rights stage or flow” means the minimum stage or flow that will protect the public interest and rights in a navigable waterway including those related to navigation, fish and wildlife, water-based recreation, aesthetic enjoyment, and water quality preservation.

(19) Spring has the meaning specified in s. 281.34(1)(f), Stats.

Note: s. 281.34(1)(f), Stats., defines “spring” to mean “an area of concentrated groundwater discharge occurring at the surface of the land that results in a flow of at least one cubic foot per second at least 80% of the time.”

(20) “Water loss” means a loss of water from the basin from which it is withdrawn as a result of interbasin diversion, as defined in s. 281.35(1)(g), Stats., or consumptive use or both.

(21) “Well” has the meaning specified in s. 281.34(1)(h), Stats.

Note: s. 281.34(1)(h) defines “well” to mean “any drillhole or other excavation or opening deeper than it is wide that extends more than 10 feet below the ground surface and is constructed for the purpose of obtaining groundwater.”

NR 820.13 High Capacity Wells Annual Pumping Reports. (1) Owners of high capacity wells shall record pumpage data on a monthly basis and shall report such information to the department at no less than an annual frequency using methods and forms provided by the department. Reports of annual pumpage for a given calendar year shall be submitted to the department no later than the first day of March in the following calendar year.

(2) Individual reports shall be prepared for any wells with the capacity to withdraw water at a rate of 100,000 gallons per day or more.

(3) If one property does not contain any single wells with an individual capacity to withdraw water at a rate of 100,000 gallons per day or more, the annual pumpage may be reported as a composite volume for the entire property based on estimated water usage using a method prescribed by the department.

(4) If one property contains wells with individual capacity to withdraw water at a rate of at least 100,000 gallons per day and wells with maximum pumping capacity less than 100,000 gallons per day, a composite pumpage volume may be reported for those wells with individual maximum pumping capacity less than 100,000 gallons per day based on estimated water usage using a method prescribed by the department.

Subchapter II – Groundwater Management Areas

NR 820.20 Groundwater Management Areas. (1) The following areas are designated as groundwater management areas. Any local governmental unit contained within these areas shall be considered to be part of the groundwater management area unless it is explicitly excluded.

(a) Southeast Wisconsin Groundwater Management Area consisting of the following:

1. All of Kenosha County.
2. All of Milwaukee County.
3. All of Ozaukee County.
4. All of Racine County
5. All of Waukesha County.
6. The portions of Walworth County consisting of the U.S. Public Land Survey Townships of East Troy, Spring Prairie, Lyons, Bloomfield, Linn and Geneva, with the exception of the village of Williams Bay and city of Elkhorn.
7. All of Washington County with the exception of the U.S. Public Land Survey Townships of Wayne and Kewaskum.

(b) Northeast Wisconsin Groundwater Management Area consisting of the following:

1. All of Brown County
2. The portions of Calumet County consisting of the U.S. Public Land Survey Townships of Woodville and Harrison and the village of Sherwood.
3. The portions of Outagamie County consisting of the U.S. Public Land Survey Townships of Grand Chute, Van den Broek, Buchanan, Freedom and Kaukauna, including the cities of Appleton, Kimberly, Combined Locks, Little Chute and Kaukauna.

Subchapter III – Environmental Review of High Capacity Well Applications

NR 820.30 High Capacity Wells in Groundwater Protection Areas.

(1) To the extent practicable, construction of high capacity wells within groundwater protection areas shall be avoided. Except as provided in par.(2), if it is not physically, technically or economically feasible to site a high capacity well outside of a groundwater protection area, the application for approval shall be supplemented to include the following information:

(a) Name of the class 1, 2 or 3 trout stream, outstanding resource water or exceptional resource water that is located within 1,200 feet of the proposed well location.

(b) Distance from the proposed well to the trout stream, outstanding resource water or exceptional resource water.

(c) If the potentially affected water body is a stream, description of the stream channel at the point nearest to the proposed well location including stream width, depth of water, seasonal flow information and nature of the substrate.

(d) If the potentially affected water body is a lake or flowage, description of the lake including identification and approximate flows of major inlets and outlets, analysis of historic lake level fluctuations, and nature of the lake bed.

(e) Description of all other wells on the high capacity property owned by the applicant including location relative to the trout stream, or outstanding or exceptional resource water, maximum pumping capacity and estimated actual pumping rate and frequency of pumping for each well.

(f) A discussion and analysis of alternative well locations and feasibility of siting the well outside of the groundwater protection area.

(g) A determination by a registered professional engineer or registered professional hydrologist of the 80% exceedance flow or level for the stream and associated water level at the location closest to the proposed well location.

(h) If the affected water body is a lake, a determination by a registered professional engineer or registered professional hydrologist of the 80% exceedance flow and level for the primary surface water outlet and the invert elevation of the primary surface water outlet.

(i) The appropriate consumptive use coefficient as determined under Ch. NR 142, Wis. Adm. Code.

(2) The department may approve a high capacity well within a groundwater protection area without evaluating potential impacts to a trout stream, outstanding resource water or exceptional resource water and the application the information specified under par. (1)(g) to (i) is not required if any of the following conditions apply:

(a) The proposed high capacity well does not have a capacity of 100,000 or more gallons per day and the high capacity well is to be used solely for domestic purposes for a single residence.

(b) The proposed high capacity is intended to be used for purposes such as fire suppression, maintaining the level of a natural pond and similar non-commercial, non-industrial and non-agricultural irrigation purposes, and the well will only be used on a sporadic basis averaging less than 30 days each year and generally operating for no more than two consecutive days.

(c) The high capacity well application is for reconstruction, as defined in s. NR 812.07(85), Wis. Adm. Code, of an existing well and the application does not seek an increase in the approved pumping capacity of the well.

(3)(a) The department may approve the proposed well without completing an environmental assessment under Ch. NR 150, Wis. Adm. Code, if it determines that construction and operation of the

proposed well will not result in significant adverse impacts to the stream or lake and at least one of the following conditions is satisfied:

1. The potentially affected water body is a trout stream and the proposed pumping capacity of the high capacity well is less than 10% of the value for the 80% exceedance flow for the stream.

2. The potentially affected water body is an outstanding or exceptional resource water that is a stream and the proposed pumping capacity of the high capacity well is less than 10% of the value for the 80% exceedance flow for the stream.

3. The potentially affected water body is an outstanding or exceptional resource water that is a lake and the proposed pumping capacity of the high capacity well is less than 10% of the value for the 80% exceedance flow for the primary surface outlet from the lake.

4. The potentially affected water body is an outstanding or exceptional resource water that is a lake with a surface water outlet and a surface area of at least 400 acres.

5. The potentially affected water body is an outstanding or exceptional resource water that is a lake with a surface water outlet, a surface area of less than 400 acres and the volume of water that could be pumped from the well in 30 days of continuous pumping at maximum capacity is less than 10% of the volume of the lake.

(b) The department shall include in any approval issued under this subsection and s. 281.34, Stats., conditions to ensure that the well will not result in significant adverse impacts to trout streams, outstanding resource waters and exceptional resource waters. The conditions may include but are not limited to conditions as to location, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow and conservation measures.

(4) The following provisions shall apply to proposed wells for which the department has determined that the proposed well may have a significant adverse impact on the trout stream, outstanding resource water or exceptional resource water including those wells that are not specified under sub. (3)(a)1 to 5:

(a) The department shall notify the applicant that the proposed well may have a significant impact on the stream or lake and may require additional information concerning flow characteristics of the affected stream or lake , site-specific geologic and hydrogeologic information and pertinent regional information.

(b) Within 60 days of receipt of a complete application the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25, Wis. Adm. Code.

(c) Following receipt of the requested information the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22, Wis. Adm. Code, and shall develop and publish a news release in accordance with s. NR 150.21, Wis. Adm. Code.

(d) If the department determines that critical resources within the stream or lake and other uses of the stream or lake will not be significantly adversely affected by operation of the proposed well, the department shall approve the well and include in any approval issued under s. 281.34, Stats., conditions

to ensure that operation of the proposed well will not cause significant adverse impacts to critical aquatic resources or other existing uses of the stream or lake. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures. The department may approve a proposed well that is predicted to result in a reduction of stream flow or lake level to a level below the public rights stage only if the reduction does not cause permanent and irreversible impacts to the stream or lake, is limited to portions of the year when such a reduction will not result in significant adverse impacts to critical resources and does not result in unreasonable detriment to other users of the stream or lake. In the case of Class 1, 2 and 3 trout streams and outstanding or exceptional resource waters that contain warm water sport fisheries, flow conditions in the stream shall be maintained such that the fish populations and critical habitat are not adversely affected.

(5) As part of an approval under s. 281.34, Stats., the department may require the owner of the well to implement a monitoring plan to document stream flow or lake level conditions in the vicinity of any well located within a groundwater protection area and based on results of the monitoring program may revise the approval issued under s. 281.34, Stats.

(6) The department shall not issue an approval under s. 281.34, Stats., for a well within a groundwater protection area unless it is able to include and includes conditions that ensure that the well does not cause significant environmental impacts.

(7) The department may order the owner of a high capacity well constructed prior to May 7, 2004 that is located in a groundwater protection area to mitigate the effects of the well. Mitigation may include abandonment of the well, replacement of the well, if necessary, and management strategies. If mitigation is ordered, the department shall provide funding for the full cost of the mitigation, except that full funding is not required if the department is authorized under Ch. 280, Stats., to require the well to be abandoned because of issues regarding public health.

NR 820.31. High Capacity Wells near Springs. (1) To the extent practicable, construction of a high capacity well near a spring shall be avoided. For any application for approval of a high capacity well under s. 281.34, Stats., the applicant shall identify and the department shall verify if there is a spring, as defined in this chapter, located in the vicinity of the proposed well.

(2) If the department determines that a proposed high capacity well is located near a spring and it is not physically, technically or economically feasible to relocate the proposed well, the department shall assess the proposed well to determine whether construction and operation of the well will result in substantially reduced flow from the spring. The department shall consider the location of the well relative to the spring, well construction details, information regarding construction and operation of all other wells on the property, available information concerning the geology and hydrogeology of the area, historical flow data for the spring and other pertinent information.

(3) The department may approve a high capacity well near a spring without evaluating potential impacts to spring if any of the following conditions apply:

(a) The proposed high capacity well does not have a capacity of 100,000 or more gallons per day and the high capacity well is to be used solely for domestic purposes for a single residence.

(b) The proposed high capacity is intended to be used for purposes such as fire suppression, maintaining the level of a natural pond and similar non-commercial, non-industrial and non-agricultural irrigation purposes, and the well will only be used on a sporadic basis averaging less than 30 days each year and generally operating for no more than two consecutive days.

(c) The high capacity well application is for reconstruction, as defined in s. NR 812.07(85), Wis. Adm. Code, of an existing well and the application does not seek an increase in the approved pumping capacity of the well.

(3) If the department determines that construction and operation of the proposed well will not result in a significant reduction in flow from the spring or cause other adverse impacts to the spring, the department may approve the proposed well and shall include in any approval issued under s. 281.34, Stats., conditions to ensure that the well will not result in significant impacts to the spring. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures.

(4) The following provisions shall apply to proposed wells that are determined to reduce flow in a spring such that significant adverse impacts to the spring or related aquatic and terrestrial resources may result:

(a) The department shall notify the applicant that the proposed well may have a significant impact on a spring and may require additional information concerning flow characteristics of the affected spring, site-specific geologic and hydrogeologic information, a discussion and analysis of alternative well locations, and pertinent regional information.

(b) Within 60 days of receipt of a complete application the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25, Wis. Adm. Code.

(c) Following receipt of the requested information the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22, Wis. Adm. Code, and shall develop and publish a news release in accordance with s. NR 150.21, Wis. Adm. Code.

(d) If the department determines that the spring and related resources will not be significantly adversely affected by operation of the proposed well, the department shall approve the well and include in any approval issued under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse impacts to the spring or critical resources related to the spring. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower

drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures. The department may approve a proposed well that is predicted to result in a reduction of flow in a spring only if the reduction does not cause permanent and irreversible impacts to the spring and related resources. The department may not approve a proposed high capacity well that is determined to result in a reduction in flow from a spring such that the spring does not flow at one cubic foot per second or greater 80% of the time or that will reduce the average flow from a spring by greater than 20%.

(5) As part of an approval under s. 281.34, Stats., the department may require the owner of the well to implement a monitoring plan to document conditions of the spring and related resources and based on results of the monitoring program may revise the approval issued under s. 281.34, Stats.

NR 820.32. Projects with High Water Loss. (1) For any application for approval of a high capacity well under s. 281.34, Stats., the applicant shall identify and the department shall verify whether the proposed use of the well will result in an annual water loss of greater than 95%. The department may require submittal of a detailed water balance as part of the application in order to determine the approximate water loss.

(2) If the department determines that a proposed high capacity well will result in an annual water loss of greater than 95%, the department shall notify the applicant that the proposed well may result in a water loss of greater than 95%. Within 60 days of receipt of a complete application the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25, Wis. Adm. Code.

(3) Following receipt of all requested information the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22, Wis. Adm. Code, and shall develop and publish a news release in accordance with s. NR 150.21, Wis. Adm. Code.

(4) If the department determines that construction and operation of the proposed well will not result in significant environmental impacts to surface and groundwater resources, the department shall approve the well and include in any approval issued under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse impacts to surface water or groundwater resources.

(5) As part of an approval under s. 281.34, Stats., the department may require the owner of the well to develop and implement a water conservation and management plan that minimizes, to the extent technically and economically feasible, the degree of water loss related to operation of the high capacity well.

(6) As part of an approval under s. 281.34, Stats., the department may require the owner of the well to implement a monitoring plan to evaluate environmental impacts caused by operation of the well and based on results of the monitoring program may revise the approval issued under s. 281.34, Stats.

NR 820.33. Public Utility Wells. Sections NR 820.30 , 820.31 and 820.32 do not apply to proposed high capacity wells that are water supplies for public water systems operated by a public utility, as defined by s. 196.01, Stats., engaged in supplying water to or for the public, if the department determines that there is no other reasonable alternative location for the well and is able to include and includes in the approval conditions, which may include conditions as to location, depth, pumping capacity, rate of flow, and ultimate use, that ensure that the environmental impact of the well is balanced by the public benefit of the well related to public health and safety.